

Serial No. 10/055,434

AMENDMENTS

In the Claims:

Please amend claims 1 and 14 as follows. This listing of claims will replace all prior versions and listings of claims in the application.

Claim Listing

1. (Currently amended) A heat reservoir device for managing a heat input subject to transient conditions, said heat reservoir device comprising: a heat transfer subsystem having a thermal path thermally coupled to said heat input; a heat storage subsystem coupled to said thermal path of said heat transfer subsystem, said heat storage subsystem remotely situated from said heat input along said thermal path of said heat transfer subsystem and comprising a phase change material capable of changing phases in response to said transient conditions causing the temperature of said phase change material to rise above its phase change temperature.

2. (Withdrawn)

3. (Original) The heat reservoir device of claim 1, wherein said heat transfer subsystem comprises a component selected from the group consisting of a heat pipe, a thermosyphon, and a liquid-cooling pump.

4. (Original) The heat reservoir device of claim 1, wherein said phase change material comprises a material selected from the group consisting of: a hydrated salt, sodium acetate, magnesium nitrate, paraffin, and water.

5. (Original) The heat reservoir device of claim 1, wherein said heat storage subsystem further comprises: a sealed case; a plurality of fins thermally coupled to said heat transfer subsystem and encapsulated by said sealed case, wherein said phase change material is thermally coupled to said plurality of fins.

6. (Original) The heat reservoir device of claim 5, wherein said heat transfer subsystem

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comprises a heat pipe, and wherein said plurality of fins comprises a series of disc-shaped fins axially distributed along and connected to said heat transfer subsystem.

7. (Original) The heat reservoir device of claim 5, wherein said heat transfer subsystem comprises a heat pipe, and wherein said plurality of fins comprises a series of radial fins thermally coupled to said heat transfer system.

8. - 10. (Withdrawn)

11. (Original) The heat reservoir device of claim 5, wherein said plurality of fins protrude from a base coupled to said heat transfer subsystem.

12. - 13. (Withdrawn)

14. (Currently Amended) A heat transfer system for managing a heat input subject to transient conditions, said heat transfer system comprising: a heat storage subsystem comprising a phase change material capable of changing phases in response to said transient conditions. causing the temperature of said phase change material to rise above its phase-change temperature; a heat transfer subsystem thermally coupled to said heat input and said heat storage subsystem; said heat storage subsystem remotely situated from said heat input; a heat rejection subsystem coupled to said heat transfer subsystem, said heat rejection subsystem configured to transfer heat to an ambient environment.

15. - 18. (Withdrawn.)